

**ABSTRACT**

An artificial bone is disclosed. The artificial bone comprises: a porous body comprising a lump of titanium or titanium alloy and having a porosity of 30 to 80%, the body having a  
5 interconnected pore (3) with a diameter of 100 to 3000  $\mu\text{m}$  and a hole (4) with a diameter of 50  $\mu\text{m}$  or less on an inner surface of the pore; and a film formed on at least a part of a surface of the pore and the hole, the film comprising at least one phase selected from an amorphous titanium oxide phase, an amorphous alkali titanate  
10 phase, an anatase phase and a rutile phase aligned with (101) plane. The artificial bone has high strength and osteoinductivity.